

eMOLT

Fall 2007 Update

Contents:

1. Mailing probes
2. Highlights of 2007 data thus far
3. Realtime Temperature Update
4. Catch vs temperature analysis
5. Drifter results from 2007
6. Website reminder

Mailing probes

As soon as you are done fishing for the year, please send your temperature probe using the enclosed self-addressed-stamped envelope. Don't forget to verify the location and depth of the deployment. If you have any questions regarding your eMOLT sites, please do not hesitate to contact me at phone: 508-495-2211
Email: james.manning@noaa.gov

Calculating multi-year averages

Now that many of you have multi-years of observations, we can construct longterm seasonal averages at your sites. We can calculate, for example, the mean temperatures for each day of the calendar year and plot the mean curve. As depicted in Figure 1, we see that there are slight differences in this mean curve but that, in the case of Mass Bay sites,

for example, the mean temperature holds steady for much of the summer and then sharply increases in the fall season. In some sites, in fact, there are often periods in May/June that are, in general, warmer than July/August! The top four panels depict 2006 being warmer than usual. In the case of Alex and Phil (bottom two panels), who have mailed in their probes this year, show 2007 being fairly normal.

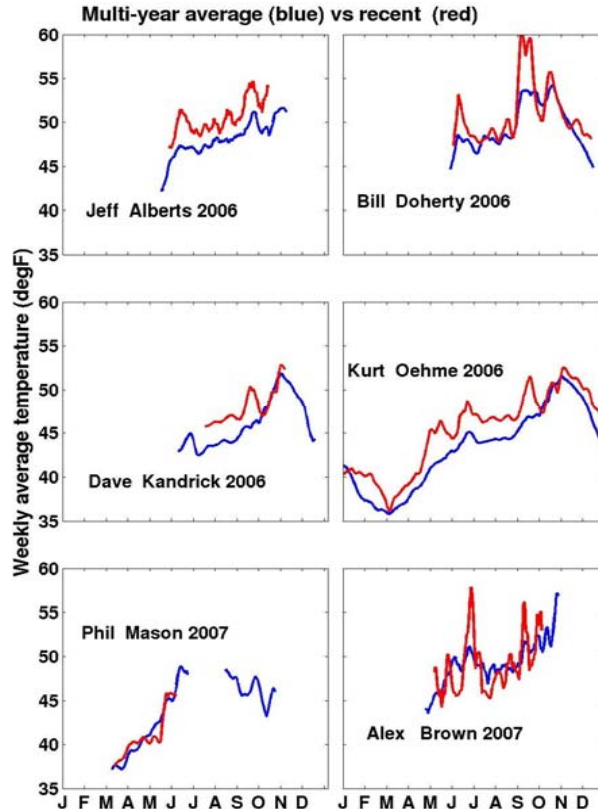


Figure 1. Comparing recent years with multi-year averages at six Massachusetts sites.

Realtime Temperature Update

As noted in previous newsletters, we are still working on the realtime temperature probe. While progress is slow, we have finally been able to send at least some data via satellite. As soon as the engineers can prove a robust system that will survive the wild (hopefully in the coming months), we hope to have multiple lobstermen deploying these probes. Again, the goal is to have an inexpensive means of reporting bottom temperatures at various locations after each haul via satellite telemetry.

Drifter results from 2007

A total of 54 drifter deployments (to document flow patterns around the Gulf of Maine) were made in May through October 2007 (Figure 2). These were funded by various institutions but the majority were tracking harmful algal blooms (ie red tide) transport. The full story is posted at <http://www.nefsc.noaa.gov/drifter>. We would like to thank the students at the Southern Maine Community College who constructed these units and all mariners who reported/recovered them.

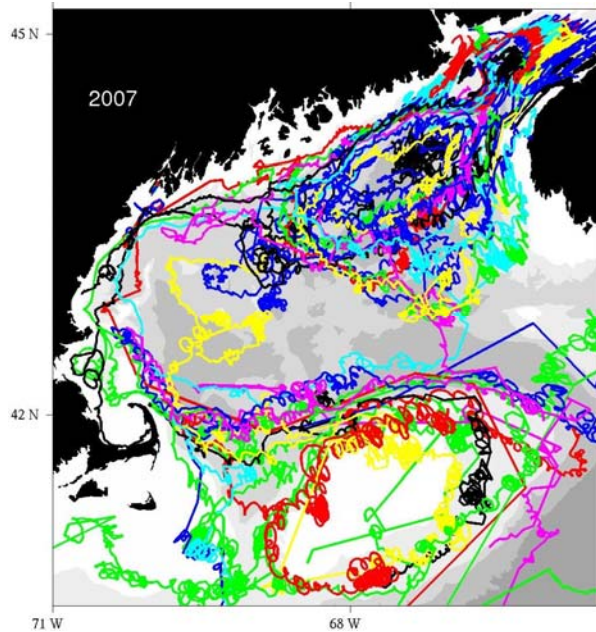


Figure 2. Student-built, satellite-tracked drifter paths in 2007.

Catch vs Temperature Analysis

We continue to examine the potential relationship between catch and temperature. Given both the catch data collected by eMOLT participants beginning in 2001 and the more recent addition of that collected by ventless trap participants, we can attempt to derive correlations with temperature as well as the change in temperature. The examples shown in Figure 3 depict an apparent relationship where the maximum catch evidently lags that of temperature but this is not always the case. A statistically significant

relationship has not been determined. We are hoping, with more data collected this past year, we will eventually be able to build a model with some confidence.

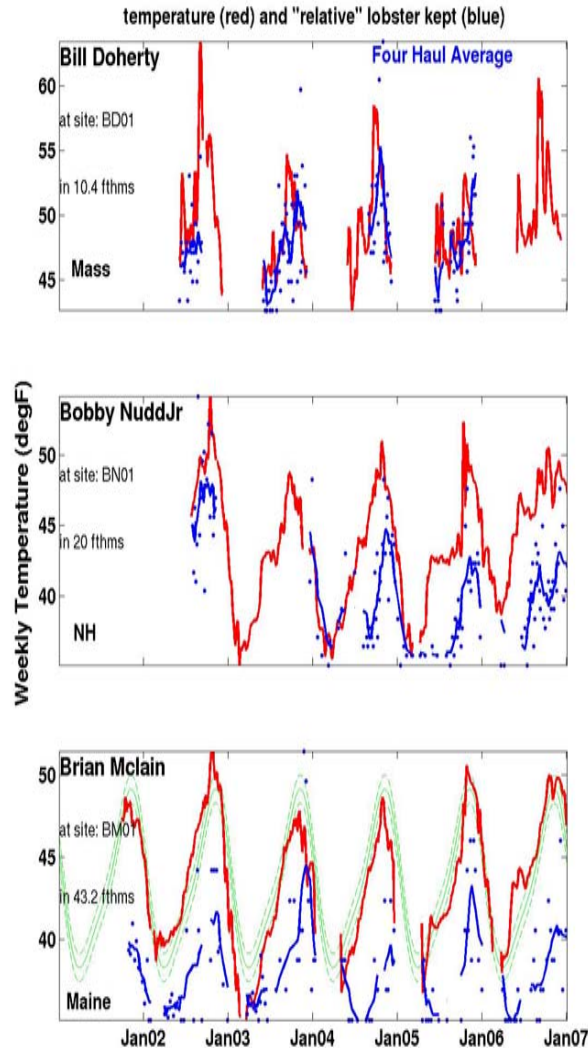


Figure 3. Catch vs temperature series with examples from Mass, NH, and Maine.